**Thinking/Pondering phase:**

1. What “objects/things” do you interact with on a daily basis?
2. What “objects/things” help you do a task in your life?
3. What “objects/things” make your life easier?
4. What “objects/things” have you always wondered about?

**Choosing your Object:**

1. What “object/thing” are you going to investigate more deeply? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   1. Why?

**Investigate your object further:**

1. How has the way that your “object/thing” is designed changed or improved over time?
2. What materials have allowed for recent updates to your “object/thing’s” design?

**Choosing & Investigating your Material:**

1. Which of those materials will you focus on for this project? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   1. Why?
2. What are the **properties** of your material? **-** typical state of matter, melting point, boiling point, strength, hardness, reflective qualities, conductivity, density etc.
3. How is your material made? Where does it come from?
4. How does your material function in your “object/thing”?
5. How does your material improve your “object/thing” compared to previous models/designs? How do its properties relate to its use in the object/thing?
6. What are the implications of using your material in your “object/thing”?
   1. What are **advantages** of using this material in your “object/thing”? *Relate to at least one of the following factors: Social, Economic, Environmental*
   2. What are **disadvantages/limitations** of using this material your “object/thing? *Relate to at least one of the following factors****:*** *Social, Economic, Environmental*

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| **BIBLIOGRAPHY** | | | |
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**ASSESSMENT**

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| **Criterion D: Reflecting on the Impacts of a Material** | | | | |
| **(0)** | **Beginning (1-2)** | **Developing (3-4)** | **Accomplished (5-6)** | **Exemplary (7-8)** |
| *I have not achieved a standard described to the right*. | *I am able to:*  **state** the ways in which a *material* is used to address a specific problem or issue    **state** the implications of the use of a *material* to solve a specific problem or issue, interacting with a factor  **apply** scientific language to communicate understanding but does so **with limited success**    document sources, **with limited success**. | *I am able to:*  **outline** the ways in which a *material* is used to address a specific problem or issue    **outline** the implications of using a *material* to solve a specific problem or issue, interacting with a factor  **sometimes apply** scientific language to communicate understanding    **sometimes** document sources **correctly**. | *I am able to:*  **summarize** the ways in which a *material* is applied and used to address a specific problem or issue    **describe** the implications of using a *material* and its application to solve a specific problem or issue, interacting with a factor    **usually apply** scientific language to communicate understanding **clearly and precisely**    **usually** document sources **correctly**. | *I am able to:*  **describe** the ways in which a *material* is applied and used to address a specific problem or issue    **discuss and analyse** the implications of using a *material* and its application to solve a specific problem or issue, interacting with a factor    **consistently apply** scientific language to communicate understanding **clearly and precisely**    document sources **completely**. |

***Command Terms for Science***

**Analyse -** Break down in order to bring out the essential elements or structure. To identify parts and relationships, and to interpret   
 information to reach conclusions.

**Apply -** Use knowledge and understanding in response to a given situation or real circumstances

**Describe -** Give a detailed account or picture of a situation, event, pattern or process

**Discuss -** Offer a considered and balanced review that includes a range of arguments, factors or hypotheses. Opinions or conclusions   
 should be presented clearly and supported by appropriate evidence

**Outline -** Give a brief account

**State -** Give a specific name, value or other brief answer without explanation or calculation

**Summarize -** Abstract a general theme or major point(s)